No. 200800196

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Trigen Seed LLC

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Hat Trick'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of Washington, D.C. this thirtieth day of July, in the year two thousand and eight.*

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions* — Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER
Trigen Seed LLC

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
05MSP5

3. VARIETY NAME
Hat Trick

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
8024 Telegraph Road
Bloomington, MN 55438

5. TELEPHONE *(Include area code)*
952-829-7740

6. FAX *(Include area code)*
952-829-8020

FOR OFFICIAL USE ONLY

PVPO NUMBER
200800196

FILING DATE
April 15, 2008

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
Corporation

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
MN

9. DATE OF INCORPORATION
Feb. 7, 1995

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*
Robert W. Romig
8024 Telegraph Road
Bloomington, MN 55438

FEES RECEIVED

FILING AND EXAMINATION FEES:
$ ① 3652.00 ② 730.00
DATE ① 4/15/08 ② 4/25/08

CERTIFICATION FEE:
$ 768.00
DATE 7/8/2008

11. TELEPHONE (Include area code)
952-829-7740

12. FAX (Include area code)
952-829-8020

13. E-MAIL
bobromig@comcast.net

14. CROP KIND *(Common Name)*
Wheat

16. FAMILY NAME *(Botanical)*
Gramineae

15. GENUS AND SPECIES NAME OF CROP
Triticum aestivum L.

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES ☑ NO

18. DOES THE VARIETY CONTAIN ANY TRANSGENES? ***(OPTIONAL)***
☐ YES ☑ NO
IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION. _____

19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)
- a. ☑ Exhibit A. Origin and Breeding History of the Variety
- b. ☑ Exhibit B. Statement of Distinctness
- c. ☑ Exhibit C. Objective Description of Variety
- d. ☑ Exhibit D. Additional Description of the Variety *(Optional)*
- e. ☑ Exhibit E. Statement of the Basis of the Owner's Ownership
- f. ☑ Exhibit F. Declaration Regarding Deposit
- g. ☑ Voucher Sample *(3,000 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
- h. ☑ Filing and Examination Fee ($4,382), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD ONLY AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)*
☑ YES *(If "yes", answer items 21 and 22 below)*
☐ NO *(If "no", go to item 23)*
☐ UNDECIDED

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?
☑ YES ☐ NO
IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☑ NO
IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☑ YES ☐ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ☑ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER
Robert W. Romig

NAME *(Please print or type)*
Robert W. Romig

CAPACITY OR TITLE
Chief Manager

DATE
April 2, 2008

SIGNATURE OF OWNER

NAME *(Please print or type)*

CAPACITY OR TITLE

DATE

ST-470 (02-08) designed by the Plant Variety Protection Office using Word 2003.

GENERAL INSTRUCTIONS: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E, F; (3) for a tuber reproduced variety, verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; and (4) payment by credit card or check drawn on a U.S. bank for $4,382 ($518 filing fee and $3,864 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice).* **NEW:** With the application for a seed reproduced variety **or by direct deposit soon after filing**, the applicant must provide at least 3,000 viable untreated seeds of the variety *per se*, and for a hybrid variety at least 3,000 untreated seeds of each line necessary to **reproduce** the variety. Partial applications will be held in the PVPO for not more than 90 days; then returned to the applicant as un-filed. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a payment by credit card or check payable to "Treasurer of the United States" in the amount of $768 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)*

Plant Variety Protection Office
Telephone: (301) 504-5518 **FAX:** (301) 504-5291
General E-mail: PVPOmail@usda.gov
Homepage: http://www.ams.usda.gov/science/pvpo/PVPindex.htm

SPECIFIC INSTRUCTIONS:
To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and **provide evidence** that the permanent name of the application variety (even if it is a parental, inbred line) has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: U.S. Department of Agriculture, Agricultural Marketing Service, Livestock and Seed Programs, **Seed Regulatory and Testing Branch**, 801 Summit Crossing Place, Suite C, Gastonia, North Carolina 28054-2193 Telephone: (704) 810-8870. http://www.ams.usda.gov/lsg/seed.htm.

ITEM

19a. Give:
(1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified

19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;
(2) attach replicated statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, *etc.*

19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

20. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. *(See Regulations and Rules of Practice, Section 97.103).*

23. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

24. *See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.*

22. CONTINUED FROM FRONT *(Please provide a statement as to the limitation and sequence of generations that may be certified.)*

23. CONTINUED FROM FRONT *(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)*

April 17, 2007 USA

24. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

200800196

EXHIBIT A
Origin and Breeding History of 'Hat Trick' (Amended)

'Hat Trick' originated from a cross between the semi-dwarf Brazilian variety 'Rubi' as the seed parent and the Argentine semi-dwarf variety 'PROINTA Real' ('P. Real') as the pollinator. The company OR Melhoramento developed 'Rubi' at Passo Fundo, Rio Grande do Sul, Brazil. The Argentine governmental organization INTA developed P. Real at the Marco Juarez Experiment Station in southern Cordova province. Both parents were rated as having good milling and baking quality for bread and were well adapted in their respective countries of origin. Additionally, 'P. Real' has shown good resistance to drought stress in Argentina.

Trigen Seed LLC made the cross in the summer of 2000 at Northfield, Minnesota. We then grew the F_1 seed in an off-season nursery conducted by Southern Seed Technology at Irwell, New Zealand, which is near Christchurch on the Southern Island.

In the spring of 2001, we planted a plot of the F_2 progeny at Warren, Minnesota at a low seeding rate of 40 lbs/a. We harvested the entire plot in bulk. Then, we subjected this F_3 seed to an air stream selection process in an Agroculex air column separator to remove light seed. We next planted an F_3 plot with an aliquot of the heavier, selected seed at Yuma, Arizona in the 2001-2002 winter season and repeated the selection process described above with the F_4 seed.

We then planted an F_4 plot at Warren, Minnesota in the spring of 2002 in the manner described above. We selected F_5 seed using the air column selection process and planted an F_5 plot with the heavier seed at Yuma, Arizona in the 2002-2003 winter season. We harvested this plot in bulk and again used an air column separation process on the F_6 seed. We planted an F_6 plot Foxhome, Minnesota with the heavier selected seed at a low seeding rate.

Thus, we subjected the F_3 to F_6 bulk seed populations to selection for denser seed by means of an air pressure separation process.

We selected heads at Foxhome, Minnesota from the shorter and more attractive F_6 plant phenotypes in the population for increase as F_7 head-rows in New Zealand in the 2003-2004 crop season. There, we harvested each uniform head-row in bulk keeping the seed from each row separate.

We again used our air separation process to select the heavier F_8 seed from the New Zealand harvest. In the spring of 2004, we included these head-row plots in a preliminary performance trial at Foxhome, Minnesota. We chose the best selection from the cross to become our experimental Line 05MSP 5, which we promoted to an advanced performance trial and grew in a small increase plot at Foxhome, Minnesota. Consequently, 'Hat Trick' is derived from the F_7 bulk population from a single F_6 head selection.

We subsequently grew a ½ hectare increase of 05MSP 5 at the Buck Semillas S. A. breeding location at La Dulce, in southern Buenos Aires Province, Argentina. We rogued this plot prior to harvest in February, 2006. We designated this F_{10} generation seed as pre breeder class. We subsequently produced Breeder seed in 2006 at Foxhome, Minnesota. We also entered line 05MSP 5 in the USDA Hard Red Spring Wheat Uniform Regional Performance Nursery.

EXHIBIT A (Cont'd)
Origin and Breeding History of 'Hat Trick' (Amended)

Then in 2007, we submitted it for milling and baking evaluations in the Wheat Quality Council Testing Program. This showed no significant difference in overall quality compared to Glenn, the benchmark quality check for bread.

Evidence of Uniformity and Stability

'Hat Trick' is a semi-dwarf type derived from a uniform-appearing single F_7 head-row selection grown in New Zealand in the 2003-04 Southern Hemisphere summer season. This row produced F_8 seed. We entered seed from this head-row in a preliminary performance trial with a single replication in Minnesota in 2004. We advanced the best performing

We harvested the uniform appearing plots individually (F_9 seed). We then advanced the top performing selections to a replicated trial grown at two locations and to a small increase (05M SP5) in 2005. We rogued the small increase, grown in Minnesota, and made a pre-breeder seed increase of the progeny at La Dulce in southern Buenos Aires Province in Argentina during the 2005-06 summer season. We rogued this plot to eliminate a few off-types to provide a uniform seed lot... We subsequently grew a breeder seed increase at Foxhome, Minnesota in 2006. We also rogued this lot to remove a few taller plants.

In 2007, the National Small Grain Variety Review Committee approved 'Hat Trick' for certification by AOSCA agencies. We then produced four lots of Foundation class seed; three in North Dakota and one in Minnesota. All four locations passed inspection for Foundation class seed (F_{12} generation). Thus, we have observed "Hat Trick' during six generations of its life cycle and seen only a few taller variants in each phase of its reproduction and multiplication. These are consistent with the mutation rate in some semi-dwarf varieties.

We will maintain the variety by reconstituting breeder seed from head selections out of Foundation seed.

Type and Frequency of Variants During Reproduction and Multiplication

We have observed up to 6 taller variants per 10,000 plants during reproduction and multiplication. We believe this is within the range of natural mutation exhibited by some semi-dwarf varieties.

#200800196

Exhibit B
Statement of Distinctness

'Hat Trick' is most similar in appearance to the hard red spring wheat variety 'Kelby'. It differs from 'Kelby' in that the flag leaf is erect, not twisted and has no waxy bloom whereas the leaf of 'Kelby is recurved, twisted and has a waxy bloom.

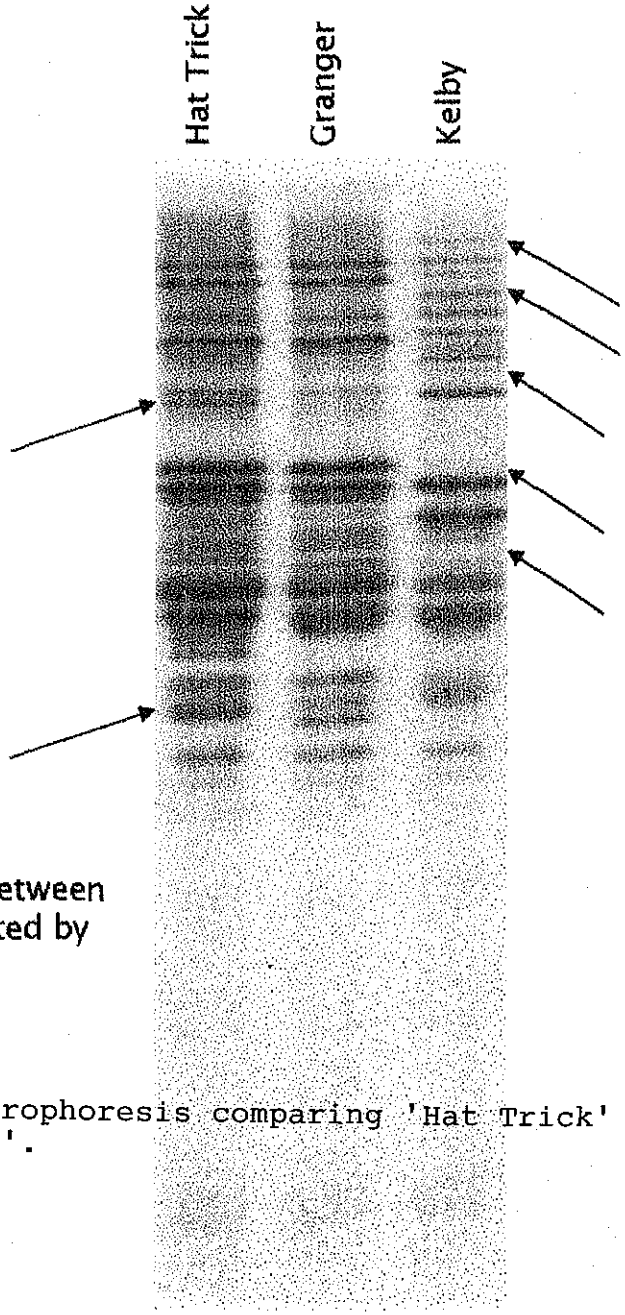
'Hat Trick' is moderately resistant to Fusarium Head Blight (FHB) caused by the organism *Fusarium graminearum* Schwabe. We have not determined the source of this resistance, but there is nothing in the genealogy of 'Hat Trick' connecting it to the Sumai 3 gene, or similar genes of Chinese origin. Thus it differs from most varieties that are currently moderately resistant to FHB that do have this, or similar genes from China, in their background.

Figure 1 shows the banding pattern in a polyacrylamide gel electrophoresis test comparing seeds of 'Hat Trick' with those of 'Kelby' and 'Granger'

#20080019696

Trigen Seed LLC - Wheat

SDSU Seed Testing Lab
PAGE Gel # 07-002
01/08/07



Note: There are many areas of differences between the three varieties, some of which are indicated by arrows.

Figure 1 Polyacrylamide Gel Electrophoresis comparing 'Hat Trick' with 'Kelby' and'Granger'.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

Exhibit C

OBJECTIVE DESCRIPTION OF VARIETY

Wheat (*Triticum* spp.)

NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME
Trigen Seed LLC	05MSP5	Hat Trick

ADDRESS *(Street and No. or RD No., City, State, Zip Code and Country)*

8024 Telegraph Road

Bloomington, MN 55438

FOR OFFICIAL USE ONLY

PVPO NUMBER

#200800196

PLEASE READ ALL INSTRUCTIONS CAREFULLY:

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g., [0][9][9] or [0][9]) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: _Royal Horticultural Soc.. Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

[1]

1 = Common
2 = Durum
3 = Club
4 = Other (Specify) _____

2. VERNALIZATION:

[1]

1 = Spring
2 = Winter
3 = Other (Specify) _____

3. COLEOPTILE ANTHOCYANIN:

[1]

1 = Absent 2 = Present

4. JUVENILE PLANT GROWTH:

[3]

1 = Prostrate 2 = Semi-Erect 3 = Erect

#200800196

5. PLANT COLOR: (boot stage)

[2]
1 = Yellow-Green
2 = Green
3 = Blue-Green

6. FLAG LEAF: (boot stage)

[1] 1 = Erect 2 = Recurved

[1] 1 = Not Twisted 2 = Twisted

[1] 1 = Wax Absent 2 = Wax Present

7. EAR EMERGENCE:

[0][5][7] Number of Days (Average)

[ ][ ]
Number of Days Earlier Than * _____

Same As * _____

[0][2]
Number of Days Later Than * Verde

Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

8. ANTHER COLOR:

[1]
1 = Yellow 2 = Purple

9. PLANT HEIGHT: (from soil to top of head, excluding awns)

[0][7][9]
cm (Average)

[0][2]
cm Taller Than Verde *

Same As _____ *

[2][0]
cm Shorter Than Chris *

#200800196

10. STEM:

A. ANTHOCYANIN

[1]

1 = Absent 2 = Present

B. WAXY BLOOM

[1]

1 = Absent 2 = Present

C. HAIRINESS (last internode of rachis)

[1]

1 = Absent 2 = Present

D. INTERNODE

[1] 1 = Hollow 2 = Semi-Solid 3 = Solid

[ ] Number of Nodes

E. PEDUNCLE

[1] 1 = Erect 2 = Recurved 3 = Semi-Erect

[ ][ ] cm Length

F. AURICLE

[1] Anthocyanin: 1 = Absent 2 = Present

[1] Hair: 1 = Absent 2 = Present

11. HEAD: (At Maturity)

A. DENSITY

[2]

1 = Lax
2 = Middense (Laxidense)
3 = Dense

B. SHAPE

[1]

1 = Tapering
2 = Strap
3 = Clavate
4 = Other (Specify) _____

C. CURVATURE

[1]

1 = Erect
2 = Inclined
3 = Recurved

D. AWNEDNESS

[4]

1 = Awnless
2 = Apically Awnletted
3 = Awnletted
4 = Awned

12. GLUMES: (At Maturity)

#200800196

A. COLOR

[1]

1 = White
2 = Tan
3 = Other (Specify) _____

B. SHOULDER

[1]

1 = Wanting 2 = Oblique
3 = Rounded 4 = Square
5 = Elevated 6 = Apiculate
7 = Other (Specify) _____

C. SHOULDER WIDTH

[ ]

1 = Narrow
2 = Medium
3 = Wide

D. BEAK

[3]

1 = Obtuse
2 = Acute
3 = Acuminate

E. BEAK WIDTH

[2]

1 = Narrow
2 = Medium
3 = Wide

F. GLUME LENGTH

[ ]

1 = Short (ca. 7 mm)
2 = Medium (ca. 8 mm)
3 = Long (ca. 9 mm)

G. WIDTH

[ ]

1 = Narrow (ca. 3 mm)
2 = Medium (ca. 3.5 mm)
3 = Wide (ca. 4 mm)

H. PUBESCENCE

[1]

1 = Not Present
2 = Present

13. SEED:

#200800196

A. SHAPE

[1]
1 = Ovate
2 = Oval
3 = Elliptical

B. CHEEK

[1]
1 = Rounded
2 = Angular

C. BRUSH

[1]
1 = Short
2 = Medium
3 = Long

[ ]
1 = Not Collared
2 = Collared

D. CREASE

[1]
1 = Width 60% or less of Kernel
2 = Width 80% or less of Kernel
3 = Width Nearly as Wide as Kernel

[2]
1 = Depth 20% or less of Kernel
2 = Depth 35% or less of Kernel
3 = Depth 50% or less of Kernel

E. COLOR

[3]
1 = White
2 = Amber
3 = Red
4 = Other (Specify) _____

F. TEXTURE

[1]
1 = Hard
2 = Soft
3 = Other (Specify) _____

G. PHENOL REACTION (See Instructions)

[5]
1 = Ivory
2 = Fawn
3 = Light Brown
4 = Dark Brown
5 = Black

H. SEED WEIGHT

[3][6] g/1000 Seed (whole number only)

I. GERM SIZE

[1]
1 = Small
2 = Midsize
3 = Large

14. DISEASE: PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED #200800196

(0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)

- [2] Stem Rust (*Puccinia graminis* f. sp. *tritici*)
- [1] Stripe Rust (*Puccinia striiformis*)
- [ ] Tan Spot (*Pyrenophora tritici-repentis*)
- [0] Halo Spot (*Selenophoma donacis*)
- [0] *Septoria nodorum* (Glume Blotch)
- [0] *Septoria avenae* (Speckled Leaf Disease)
- [ ] *Septoria tritici* (Speckled Leaf Blotch)
- [4] Scab (*Fusarium* spp.)
- [ ] "Black Point" (Kernel Smudge)
- [0] Barley Yellow Dwarf Virus (BYDV)
- [0] Soilborne Mosaic Virus (SBMV)
- [0] Wheat Yellow (Spindle Streak) Mosaic Virus
- [0] Wheat Streak Mosaic Virus (WSMV)
- [ ] Other (Specify) _____
- [ ] Other (Specify) _____
- [ ] Other (Specify) _____

- [2] Leaf Rust (*Puccinia recondita* f. sp. *tritici*)
- [0] Loose Smut (*Ustilago tritici*)
- [0] Flag Smut (*Urocystis agropyri*)
- [0] Common Bunt (*Tilletia tritici* or T. *laevis*)
- [0] Dwarf Bunt (*Tilletia controversa*)
- [0] Karnal Bunt (*Tilletia indica*)
- [1] Powdery Mildew (*Erysiphe graminis* f. sp. *tritici*)
- [0] "Snow Molds"
- [0] Common Root Rot (*Fusarium*, *Cochliobolus* and *Bipolaris* spp.)
- [0] Rhizoctonia Root Rot (*Rhizoctonia solani*)
- [0] Black Chaff (*Xanthomonas campestris* pv. *translucens*).
- [0] Bacterial Leaf Blight (*Pseudomonas syringae* pv. *syringae*)
- [ ] Other (Specify) _____
- [ ] Other (Specify) _____
- [ ] Other (Specify) _____
- [ ] Other (Specify) _____

15. INSECT: (0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

- [0] Hessian Fly (*Mayetiola destructor*)
- [1] Stem Sawfly (*Cephus* spp.)
- [0] Cereal Leaf Beetle (*Oulema melanopa*)
- [ ] Other (Specify) _____
- [ ] Other (Specify) _____
- [ ] Other (Specify) _____

15. INSECT: (continued) (0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)

#200800196

PLEASE SPECIFY BIOTYPE (Where Needed)

[0] Russian Aphid (*Diuraphis noxia*)

[0] Greenbug (*Schizaphis graminum*)

[0] Aphids

[ ] Other (Specify) _____

[ ] Other (Specify) _____

[ ] Other (Specify) _____

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS:

Exhibit D

Additional Description of the Variety 'Hat Trick'

Characteristics

'Hat Trick' is a semi-dwarf hard red spring wheat with hollows stems and white/amber, mid-length awns at maturity. It has an erect juvenile growth and green leaf color (RHS 136B), with an erect flag leaf that is not twisted and with no waxy bloom. It has strong straw with good resistance to lodging. The anther color is yellow and the stem color is white at maturity. The mid-dense spike is tapering and erect at maturity. It has the high molecular weight glutenin sub units 2*, 7 + 8, and 5 + 10. It is medium-early in maturity.

'Hat Trick' is adapted to the Northern Plains of the U.S. as is shown in Table 1. It can be seen that 'Hat Trick' has comparable agronomic traits to those of current popular varieties in the area.

Table 1. Performance Data Comparisons at Foxhome, MN and Park River, ND in Trigen Seed LLC Trials in 2007.

Variety	Average Yield	Average Test Weight	Average Protein	Heading Days from 6/1	Relative Maturity (1-9)*	Average Height	Average Lodging
	kg/ha	kg/hl	%	Foxhome, MN		cm	(1-9)**
Faller	5,217	72.1	13.5	26	7	81.3	1.5
Hat Trick	4,812	74.5	13.8	23	4	78.7	1
Howard	4,590	73.9	14.0	24	6	74.9	1
Knudson	4,583	73.0	13.2	22	6	77.5	1.5
Freyr	4,576	72.5	13.0	22	3	80.0	1.5
Traverse	4,516	68.4	13.4	21	5	86.4	1.5
Banton	4,334	74.1	13.4	21	5	82.6	1
Ulen	4,334	71.2	14.5	22	2	82.6	1.5
Kelby	4,233	72.8	14.7	20	4	71.1	1
Kuntz	4,172	74.0	13.4	21	5	74.9	1
Average	**4,5367**	**72.6**	**13.7**	**22**	**4.7**	**79.0**	**1.2**
CV	**9.3**						
LSD	**6.9**						

*** 1 = earliest, ** 1 = erect.**

Its primary purpose will be for use in breadstuffs. 'Hat Trick' generally meets or exceeds the Hard Red Spring Wheat Breeding Quality Target Values promulgated by the Wheat Quality Council since it has good test weight, good protein, and high falling number value. Milling and baking data are given in Tables 2 and 3. Farinograph and alveograph curves are given in Figures 2 and 3. These confirm the good quality traits of 'Hat Trick' for bread.

California Wheat Commission

Firm

Sample I.D. 62465 Date 10/31/06

Absorption % 58.4 Arrival (min) 2

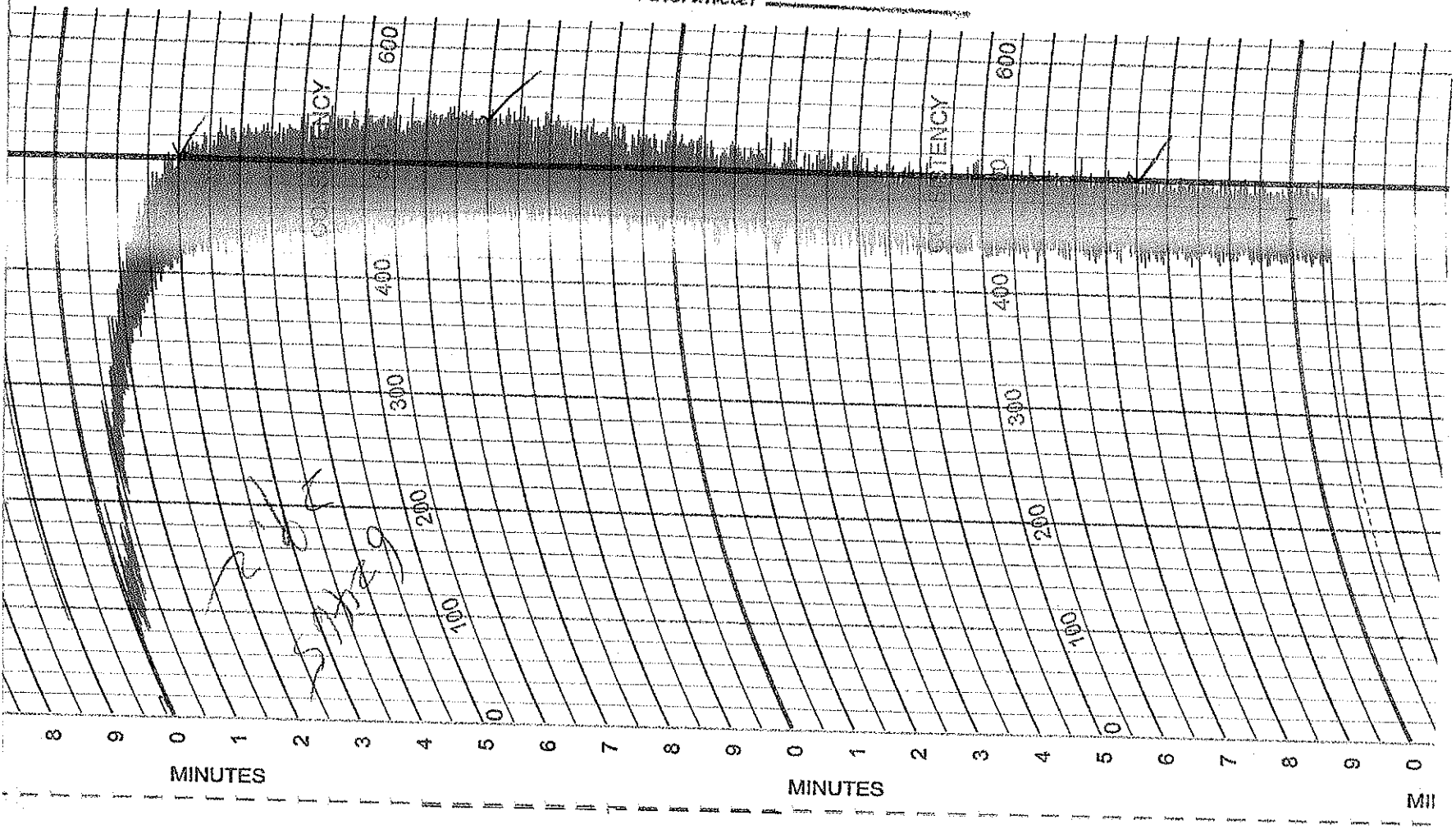
Mixing Peak (min) 7 Departure (min) 17.5

M.T.I. (B.U.) 40 M T. (min) 15.5

T.M.D. (B.U.) 30 Valorimeter

OBF SP2

Hat TRICK



#20080019 6

Figure 2. Farinograph Curve For 'Hat Trick'.

CHOPIN ALVEOGRAPHE

Essai - Test / Ensayo - Prova N° 62465 Date - Date / Fecha - Data 10/31/06

Objet - Subject / Objeto - Oggetto 06F 502 - V16 HAT TRICK

H_2O 13.57 % H_2O _____ ml

W = 6.54 x S 49 = 320.3 **x 10^{-4} Joules**

s I cr

P = H

P200 = h 4cm

s II cr

G =

L = C

s III cr

#20080196

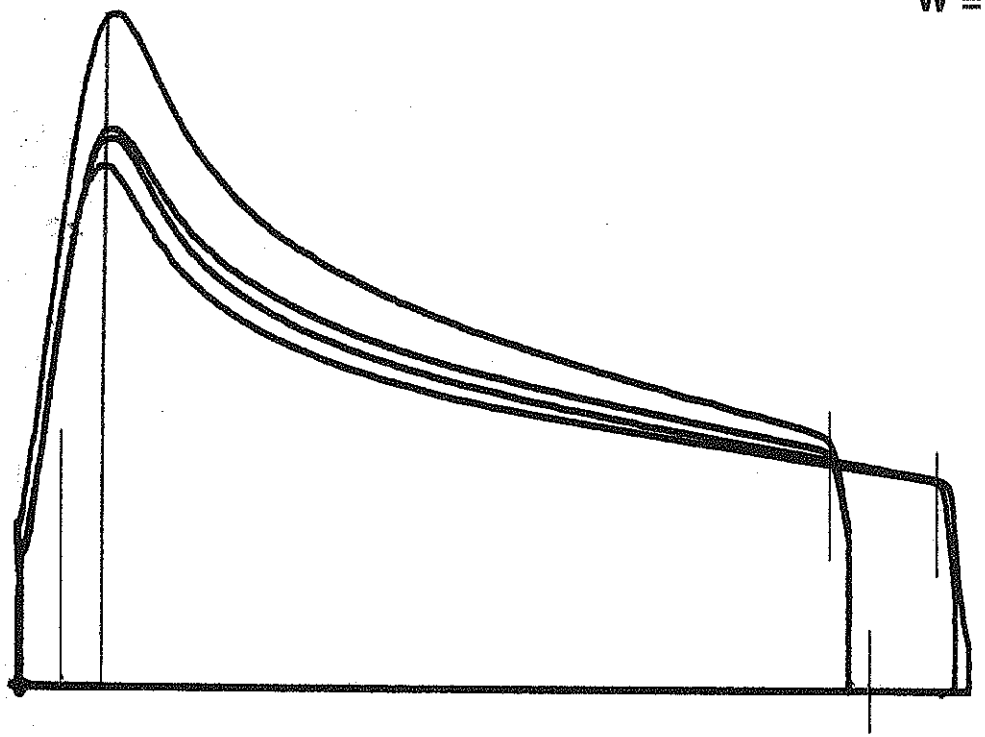


Figure 3. Alveograph Curve For 'Hat Trick'.

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Table 2. Milling and Baking Data Comparisons, from Trigen Seed LLC Trials in 2006.*

Trait	Banton (Check)			Hat Trick			Difference. (HT - Banton)
	Fox home MN	Park River ND	Mean	Fox home MN	Park River ND	Mean	
Kernel							
Hardness	65	61	63.0	61	53	57.0	-6.0
MKV	36.0	38.2	37.1	35.5	37.9	36.7	-0.4
Flour							
Yield %	70.7	69.0	69.9	71.8	68.3	70.1	0.2
Protein %	13.6	14.9	14.2	12.1	13.0	12.6	-1.7
Ash	0.390	0.380	0.385	0.420	0.380	0.400	0.015
Fall #	380	377.0	378.5	379	370	374.5	-4.0
Wet Glut	33.2	39.4	36.3	33.3	37.7	35.5	-0.8
Farinograph							
Absorption	56.4	59.8	58.1	58.4	63.4	60.9	2.8
Arrival (min)	4.0	5.5	4.8	2.0	8.0	5.0	0.3
Mix Peak (min)	10.0	14.5	12.3	7.0	15.0	11.0	-1.3
Mix Tol (min)	36.0	25.0	30.5	15.5	20.0	17.8	-12.8
Departure (min)	40.0	30.5	35.3	17.5	28.0	22.8	-12.5
MTI BU	10	10	10.0	40	5	22.5	12.5
Alveograph							
P	68.5	66.6	67.6	82.2	62.4	72.3	4.8
L	102.0	148.0	125.0	113.0	157.0	135.0	10.0
P/L	0.7	0.5	0.6	0.7	0.4	0.6	0.0
W	315.4	399.2	357.3	320.3	306.2	313.3	-44.1
Bread Test							
Volume, cc	1000.0	950.0	975.0	925.0	965.0	945.0	-30.0
Sp Vol cc/g	7.3	6.8	7.1	6.7	6.7	6.7	-0.4
Grain Text	S	S	S	S	S	S	None
Score	5	5	5.0	4	5	4.5	-0.5
Comments	Exc	Exc	Exc	Exc	Exc	Exc	None

* California Wheat Commission Laboratory Results

Table 3. Quality Data Comparisons for Hat Trick from the Wheat Quality Council 2007 Evaluations.

Trait	Location & Variety				Average	
	Casselton, ND		Williston, ND			
	Glenn	Hat Trick	Glenn	Hat Trick	Glenn	Hat Trick
ARS WQL Evaluation						
Wheat Protein (12% MB)	15.0	15.2	17.6	19.2	16.3	17.2
Flour Protein (12% mb)	14.1	14.4	16.9	17.5	15.5	16.0
Market Value (Score 1-6)	4.1	4.5	4.1	3.8	4.1	4.2
Market Value (Score 1-10)	10.0	10	10.0	9.2	10.0	9.6
Test Weight (lb/bu)	62.8	62.4	58.2	56.3	60.5	59.4
1000 Kernel Weight (g)	27.2	29.7	22.4	21.1	24.8	25.4
Kernel Size % Large	50	41	7	2	28.5	24.0
Kernel Size % Small	7	12	17	41	9.5	26.5
Wheat Ash (14% mb)	1.73	1.48	1.46	1.70	1.60	1.54
Wheat Falling Number (sec)	425	488	437	498	431	493
Vitreous Kernels (%)	90	69	100	97	95	83
Flour Extraction (%)						
Tempered Wheat Basis (%)	68.8	72.0	69.6	69.2	69.2	70.6
Total Product Basis (%)	71.2	75.0	72.8	72.0	72.8	73.5
Flour/Bu Wheat (lbs)	44.8	46.6	42.5	40.8	43.6	43.7
Flour Color Brightness (L*)	90.1	91.1	90.3	89.7	90.2	90.4
Flour color yellowness (b)	9.4	9.9	10.0	10.4	9.7	10.2
Flour Ash (14% mb)	0.421	0.430	0.472	0.435	0.448	432
Flour Falling Number (Malted) (sec)	258.0	248	258.0	246	258.0	247
Farinograph						
Water Absorption (500bu)	65.3	65.1	67.1	67.0	66.2	66.0
Water absorption(14%mb)	64.0	60.2	65.2	65.3	64.6	62.8
Arrival Time (min)	1.8	2.6	5.2	4.3	3.2	3.4
Peak Time (min)	3.8	7.8	9.4	7.9	6.6	7.8
Dough Stability (min)	8.5	9.8	14.8	12.5	11.6	11.2
MTI (bu)	22.0	34	16.0	18	19.0	26
TTB (min)	9.4	12.1	18.3	17.9	13.8	15.0
Cooperator Evaluation						
Bake Absorption (Avg %)	64.3+/-1.9	62.0+/-2.4	65.6+/-1.9	65.5+/-2.0	66.0	63.8
Loaf Volume (Avg % of Check)		101.0		97.5+/-5.4		99.2
Overall Comparison	3.0	2.8+/- 0.8	3.0	2.9+/-1.1		2.8

The results from a Fusarium Head Blight (FHB) test in an inoculated nursery at Crookston, Minnesota in 2006 are presented in Table 3. This table documents the trait of low FHB that first drew our attention to 'Hat Trick' in 2004 when it was an experimental line.

Table 4. Fusarium Head Blight Results, Crookston, MN 2006 Test.

Variety	Incidence	Disease Severity	30 Head Weight	Micro TWT	Visually Scabby Kernels	DON
Hat Trick (MR)	45.0	4.2	18.3	11.6	8.0	6.8
Alsen (MR)	86.7	19.5	15.3	11.2	7.3	5.5
BacUp (MR)	90.0	11.0	15.7	11.0	9.0	4.1
Roblin (S)	96.7	59.3	14.0	9.5	48.3	5.7
MN00269 (S)	100.0	79.8	8.1	9.5	40.0	5.3
Wheaton (S)	100.0	90.8	9.6	9.0	75.0	13.2

'Hat Trick' is susceptible to stripe rust (*Puccinia striiformis*_West) in the Pacific Northwest. It is also susceptible to race TNRJ of leaf rust (*P. recondite* Rob. ex Desm. f. sp. *tritici*), but resistant to races MCDS, MHDS, TGBG, SBDG, THBJ, TCTD, AND MJBJ. (Report on Hard Red Spring Wheat Varieties Grown in Cooperative Plot and Nursery Experiments in the Spring Wheat Region in 2006) It is resistant to moderately resistant to stem rust (*P. graminis* Pers. f. sp. *tritici* Eriks. & Henn.) in the U.S. However, it is susceptible to race Ug99 found in East Africa and the Middle east.

Insect Resistance

'Hat Trick' has not been tested against Hessian fly, greenbug, grasshoppers, English grain aphid, chinch bug, army worm, cereal leaf beetle or Russian wheat aphid. It is probably susceptible to the wheat stem sawfly because of its hollow stem internodes.

REPRODUCE LOCALLY. Include form number and edition date on all reproductions. FORM APPROVED - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued *(7 U.S.C. 2421)*. The information is held confidential until the certificate is issued *(7 U.S.C. 2426)*.

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Trigen Seed LLC	05MSP5	Hat Trick
4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*	**5. TELEPHONE** *(Include area code)*	**6. FAX** *(Include area code)*
8024 Telegraph Road Bloomington, MN 55438	952-829-7740	952-829-8020
	7. PVPO NUMBER	
	200800196	

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. **If no, please explain.** [X] **YES** [ ] **NO**

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? **If no, give name of country.** [X] **YES** [ ] **NO**

10. Is the applicant the original owner? [X] **YES** [ ] **NO** **If no, please answer one of the following:**

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?
[ ] **YES** [ ] **NO** **If no, give name of country**

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?
[ ] **YES** [ ] **NO** **If no, give name of country**

11. Additional explanation on ownership *(Trace ownership from original breeder to current owner. Use the reverse for extra space if needed)*:

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT F
DECLARATION REGARDING DEPOSIT

NAME OF OWNER (S)	ADDRESS *(Street and No. or RD No., City, State, and Zip Code and Country)*	TEMPORARY OR EXPERIMENTAL DESIGNATION
Trigen Seed LLC	8024 Telegraph Road Bloomington, MN 55438	05MSP5
		VARIETY NAME Hat Trick
NAME OF OWNER REPRESENTATIVE (S)	ADDRESS *(Street and No. or RD No., City, State, and Zip Code and Country)*	FOR OFFICIAL USE ONLY
Robert W. Romig	8024 Telegraph Road Bloomington, MN 55438	PVPO NUMBER 200800196

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

Robert W. Romig
Signature

April 2, 2008
Date